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EXAMINER

HO, THOMAS M

ART UNIT PAPER NUMBER

2134

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/751,246	Applicant(s) USSERY ET AL.	
	Examiner Thomas M. Ho	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. *The response of 01/22/06 has been received and entered.*
2. *Claims 1-32 are pending.*

Response to Arguments

3. The Applicant has argued on page 14:

In the interest of addressing the Examiner's specific points with regard to WESS, applicant notes that the file defragmentation process described in WESS and the Office Action do not meet the plain limitations of the claims. The Office Action incorrectly states that "WESS discloses an embodiment wherein the controller operates to periodically re-distribute the database over the memory units of the harddrive, i.e., the files of the database"

In a fragmentation process, as known to those of skill in the art, files are not "distributed" but rather are "compacted", that is, rewritten to contiguous blocks of sectors of hard disk space. The Examiner's statement appears to suggest that the "memory units" over which the database is "distributed" are the "files of the database." On the contrary, in a typical defragmentation process, individual files, (including database files) are rewritten to be physically stored on substantially contiguous blocks of sectors. The hard drive's logical file structure is intended to be unaffected, so that programs can continue to operate normally. No databases would be "re-distributed" between files in the database, as the Office Action would appear to suggest.

Applicant's primary contention with the Examiner's rejection in view of WESS appears to be that a defragmentation process, a process commonly used in the art to reorganize and compact information on hard drives, does not read upon the Applicant's claimed limitation "re-distributing the database over the memory units of the hard drive"

The Applicant's argument is that a defragmentation process (informally a "defrag"), compacts data rather than re-distributes it.

The Examiner contends however that the process of defragmentation, "compacts" the data on a hard drive through a *redistribution* effort.

Unlike the manipulation of a physical matter, which can be lumped together by pushing objects closer to one another, the data on a hard drive is stored in individual bits of zeros and ones, relegated to particular positions on the hard drive. The movement of the information is not a physical movement and does not take place through an actual pushing or pulling, but rather takes place through a method of deleting the information from one portion of the hard drive and saving the information on another portion of the hard drive.

In particular, in a defragmentation process the information that is sought to be defragmented may be read from any portion of the hard drive. Once this information is read and deleted from its old location from the hard drive, the information is saved in a new location that lies in close proximity to the location where all the other pieces of information are saved.

The Microsoft Computer Dictionary 5th edition describes the process of defragmenting as such:

“The process of rewriting parts of a file to contiguous sectors on a hard disk to increase the speed of access and retrieval. When files are updated, the computer tends to save these updates on the largest continuous space on the hard disk, which is often on a different sector than on other parts of the file. When files are thus “fragmented,” the computer must search the hard disk each time the file is accessed to find all of the files parts, which slows down response time.

It is well known to those of ordinary skill in the art that the process of defragmentation requires the physical reorganizing of the contents of the data, and involves, during the course of the defragmentation, the data on the hard drive is continuously redistributed until the files are contiguously and compactly ordered.

Defragmentation

From Wikipedia, the free encyclopedia

In the context of administering computer systems, **defragmentation** (or **defragging**) is a process that eliminates fragmentation in file systems. It does this by physically reorganizing the contents of the disk in order to store the pieces of each file close together and in order (contiguously). It also attempts to create large regions of free space using *compaction*, to impede the return of fragmentation.

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A defragmentation program must move files around within the free space available in order to undo fragmentation. This is a memory intensive operation and cannot be performed on a file system with no free space. The reorganization involved in defragmentation does not change logical location of the files (defined as their location within the directory structure).

For this reason, the Examiner has construed this reorganizing, or reshuffling of the contents of the hard drive within the process of defragmentation as “redistributing” the data as recited in claim 1.

Finally, the Examiner offers further support to buttress this interpretation under US patent 6130759, which refers to the defragmentation of the memory of an image transfer device as a “redistributing” process.

“Fragmentation is reduced in a memory of an image transfer device by coalescing segments of rasterized, compressed and distributed page strips into preallocated buffers, and then redistributing the strips back into the memory such that smaller holes in the memory are filled before larger holes”

Further support for this interpretation may be found in (Column 5, lines 55 – Column 6, lines 25)

For these reasons, the Examiner has found Applicant's argument unpersuasive and the rejection is maintained.

Applicant's additional arguments on page 19 do not offer any additional arguments or support for its position and states that the arguments presented apply to WESS as well. Applicant's additional arguments are unpersuasive because they appear to consist of allegations that the prior art does not disclose their claimed invention and/or an allegation of general patentability. No substantial argumentative support appears to be offered, and the crux of Applicant's arguments appear to be the reasoning as presented on page 14.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al, US patent 5764949(henceforward referred to as Huang) and Worker Exposure Surveillance System, 1997, Oak Ridge Associated Universities(henceforward WESS)

In reference to claim 1:

Huang (Figure 1) discloses an apparatus for use in managing a database of selectable records, a database administrator for association with a computer system having distributed memory units, said administrator comprising:

- A security controller that operates repeatedly to (i) divide said database into portions and (ii) store ones of said portions to ones of said distributed memory units, said security controller thereby systematically redistributing said database over said distributed memory units, where the database is divided into and distributed memory units, and where the security controller is the interface module. (Figure 1)
- An access controller that operates to repeatedly establish views of ones of said selectable records responsive to said security controller redistributing said database over said distributed memory units, where the access controller is the interface module, where the views of the selectable records are particular instantiations that exist per server. (Figure 1)

Huang fails to explicitly disclose an embodiment wherein the security controller operates to periodically distribute the database over the said units, where the units are memory units.

WESS discloses a system in which a database system is running. (page 29-32) WESS also discloses details in regards to defragmentation of the disk drive. "When fragmentation is not excessive, it presents no problem to the user. However files can become fragmented to the point where performance suffers. This can be observed in longer times being required to search data sets or collect specific records for display."

WESS discloses an embodiment wherein the controller operates to periodically re-distribute the database over the memory units of the hard drive, ie, the files of the database. "It is recommended that the database manager periodically defragment the hard drive where the WESS database resides, after backing up the data". (page 31)

It would have been obvious to one of ordinary skill in the art at the time of invention to periodically distribute the database over said memory units, in the hard drives in which the database resides in order to keep the fragmentation of the database and other files residing on the hard drive to a minimum and prevent search performance from suffering.

In reference to claim 2:

Huang (Figure 1) discloses the database administrator set forth in claim 1 wherein said access controller is further operable to access ones of said selectable records, where the interface module is operable to access the selectable records.

In reference to claim 3:

Huang (Figure 1) and (Column 3, lines 5-67) discloses the database administrator set forth in claim 1 initially operable to instantiate said database of selectable records through the clients.

In reference to claim 4:

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Huang (Figure 1) discloses the database administrator set forth in claim 3 wherein said initially instantiated database of selectable records is stored in a select memory unit, where each select memory unit is the memory unit on the server.

In reference to claim 5:

Huang (Figure 2) & (Column 4, lines 40-65) discloses the database administrator set forth in claim 1 wherein said security controller is further operable, prior to subsequently dividing said database into portions, to combine said ones of said portions previously stored in ones of said distributed memory units in a select memory unit, where the portions of the distributed memory units may be executed and stored in a common memory area, or the storage unit (Figure 2, Item 226) of the Interface computer.

Claims 6, 11, 15 are rejected for the same reasons as claim 1.

Claims 7, 12, 16 are rejected for the same reasons as claim 2.

Claim 8 is rejected for the same reason as claim 3.

Claims 9, 13, 17 are rejected for the same reasons as claim 4.

Claims 10, 14, 18 are rejected for the same reasons as claim 5.

6. Claim 1, 6, 11, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dwyer and Worker Exposure Surveillance System, 1997, Oak Ridge Associated Universities(henceforward WESS)

In reference to claim 1:

Dwyer(Figure 1) discloses an apparatus for use in managing a database of selectable records, a database administrator for association with a computer system having distributed memory units, said administrator comprising:

- A security controller that operates repeatedly to (i) divide said database into portions and (ii) store ones of said portions to ones of said distributed memory units, said security controller thereby systematically redistributing said database over said distributed memory units, where the database is divided into local views and distributed memory units, and where the security controller is the external scheme and conceptual schema that processes these divisions. (Figure 1)
- An access controller that operates to repeatedly establish views of ones of said selectable records responsive to said security controller redistributing said database over said distributed memory units, where the access controller is the internal schema, which houses the database directory and the local representations schema which establishes the views of the selectable records in each distributed memory unit. (Figure 1)

Dwyer fails to explicitly disclose an embodiment wherein the controller operates to periodically distribute the database over the said units, where the units are memory units.

WESS discloses a system in which a database system is running. (page 29-32) WESS also discloses details in regards to defragmentation of the disk drive. "When fragmentation is not

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excessive, it presents no problem to the user. However files can become fragmented to the point where performance suffers. This can be observed in longer times being required to search data sets or collect specific records for display.”

WESS discloses an embodiment wherein the controller operates to periodically re-distribute the database over the memory units of the hard drive, ie, the files of the database. “It is recommended that the database manager periodically defragment the hard drive where the WESS database resides, after backing up the data”. (page 31)

It would have been obvious to one of ordinary skill in the art at the time of invention to periodically distribute the database over said memory units, in the hard drives in which the database resides in order to keep the fragmentation of the database and other files residing on the hard drive to a minimum and prevent search performance from suffering.

Claims 6, 11, 15 are rejected for the same reasons as claim 1.

7. Claims 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al and Diaz et al., US patent 5689648.

In reference to claim 19:

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Huang discloses an apparatus for use over a global communications network having nodes and constituency nodes associated therewith comprising:

- a database of selectable data files associated with said company nodes, wherein said company nodes populate respective associated data files, where the nodes are the servers. (Figure 1)
- a communications controller that is operable to i) propagate communication interfaces accessible by said constituency nodes with selected portions of said information under direction of said nodes, where the communication interfaces are accessible by the nodes through the execution of supported SQL queries and ii) gather feedback information representative of constituency response to said constituency nodes accessing said communication interfaces, where the communications controller is the interface module which gathers SQL queries to be sent and executed. (Column 5, lines 15-35)
- a database administrator for association with distributed memory units, where the database administrator is the Interface module application. (Figure 2, Item 106), said database administrator comprising:
 - a security controller that operates repeatedly to i) divide said database into portions and ii) store ones of said portions to ones of said distributed memory units, said

security controller thereby systematically redistributing said database over said distributed memory units, where the security controller is the interface module and the database is divided and stored into portions of distributed memory units (Figure 1)

- an access controller that operates to repeatedly establish views of ones of said selectable records responsive to said security controller redistributing said database over said distributed memory units, where the access controller is the interface module, where the views of the selectable records are particular instantiations that exist per server. (Figure 1)

Huang however, fails to disclose information that is commercial and likewise, a communication system that acts in the context of an E-Commerce system.

Diaz et al. (Column 8, line 50 – Column 9, line 2) discloses a method and apparatus for publication of information for CATV through a computer network through the use of databases to store its data that it will send out to clients. Diaz et al. (Column 13, lines 13-25) also discloses an e-commerce system that stores company data in a database and in particular provides the use of databases in a corporate context.

Huang teaches a method that gives the advantage to clients to deal with a heterogeneous database system to be under the illusion of dealing with a single back-end database system by using a single interface module.

Huang fails to explicitly disclose an embodiment wherein the security controller operates to periodically distribute the database over the said units, where the units are memory units.

WESS discloses a system in which a database system is running. (page 29-32) WESS also discloses details in regards to defragmentation of the disk drive. "When fragmentation is not excessive, it presents no problem to the user. However files can become fragmented to the point where performance suffers. This can be observed in longer times being required to search data sets or collect specific records for display."

WESS discloses an embodiment wherein the controller operates to periodically re-distribute the database over the memory units of the hard drive, ie, the files of the database. "It is recommended that the database manager periodically defragment the hard drive where the WESS database resides, after backing up the data". (page 31)

It would have been obvious to one of ordinary skill in the art at the time of invention to use Huang's method of interfacing with heterogeneous databases, into the database interface system for clients used in Diaz et al. in order to allow the clients to acquire data from the database without having to worry about the particular DBMS used in each server system, effectively providing the clients, a common software and SQL language interface from which data from a plurality of different databases with different DBMS can be accessed and to periodically

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distribute the database over said memory units, in the hard drives in which the database resides in order to keep the fragmentation of the database and other files residing on the hard drive to a minimum and prevent search performance from suffering.

In reference to claim 20:

Huang discloses the electronic system for use over a global communications network recited in claim 19 wherein said communications controller is further operable to process said gathered feedback information and, in response thereto, modify one of said data lines, where the gathered feedback information and modification of said data lines is the interface module accepting and processing SQL queries. (Column 5, lines 15-35)

In reference to claim 21:

Huang discloses the electronic system for use over a global communications network recited in claim 19 wherein said communications controller is further operable to analyze said gathered feedback information and ones of said data files and, in response thereto, to report results thereof to said company node, where the gathered feedback is the response to the SQL query from which a report is generated, often in the form of selected tables. (Column 7, lines 45-55)

In reference to claim 22:

Huang discloses the electronic system for use over a global communications network recited in claim 19 wherein said communications controller, while gathering said feedback information,

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employs mathematical representations to represent at least one of constituency understanding and constituency reaction.

A mathematical representation of constituency understanding and reaction in a database is inherent to any database that is capable of processing SQL queries. Relational databases today are organized by the database schema, which is the conceptual design of the database in mathematical form. Furthermore, these SQL statements themselves are mathematical operations including, JOIN, INTERSECTION, NOT, operations well known in mathematics, and widely supported by SQL languages.

In reference to claim 23:

Diaz et al. (Column 5, lines 15-50) discloses the electronic system for use over a global communications network recited in claim 19 further comprising a security controller that is operable, with respect to those data files associated with said company node, to limit access to said those data files to designated personnel of said company nodes, where the company nodes are the client systems from which they can view the news, and where the access is limited subscribers and the services that clients have subscribed to.

In reference to claim 24:

Neither Diaz et al. nor Huang discloses the electronic system for use over a global communications network recited in claim 23 wherein said security controller includes an

interactive voice recognition controller that is operable to verify the identity of said designated personnel.

Diaz et al. (Column 5, lines 25-30) however discloses that it is necessary to verifying identifying information of a client or subscriber.

The Examiner takes official notice that an interactive voice recognition system as an identification mechanism was well known in the art at the time of invention such as that disclosed by US patent 6173042, and 4534056.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine a voice recognition system in order to verify a customer because it provides the advantage of allowing a customer verify him or herself through only speaking, and without having to enter authentication data into a computer.

In reference to claim 25:

Diaz et al. (Column 4, lines 55-65) discloses the electronic system for use over a global communications network recited in claim 19 wherein said communications controller is further operable to translate said selected portions of said commercial information from a first language into a second language, where the commercial information, the newspaper has several versions translated into several different languages as in common in news media distribution.

In reference to claim 26:

Diaz et al. (Figure 1) discloses the electronic system for use over a global communications network recited in claim 19 wherein said communications controller is further operable to store, index and relate associated portions of said commercial information in the data repository, where the commercial data is the news data which is stored, indexed and, related (Figure 6b) as to be viewable to user in a convenient manner.

In reference to claim 27:

Huang (Figure 1) discloses the electronic commerce system for use over a global communications network recited in claim 19 wherein said access controller is further operable to access ones of said selectable data files, where the access controller is the interface module which can access the data files of the database.

Diaz et al. (Figure 1) discloses this as well, where the selectable data files may be accessed and displayed at user displays.

In reference to claim 28:

Huang (Figure 1) and (Column 3, lines 5-67) discloses the electronic commerce system for use over a Global communications network recited in Claim 19 wherein said database administrator is initially operable to instantiate said database of selectable database files, where the databases are instantiated through their own database management systems, or have already been instantiated by the distributed servers themselves.

In reference to claim 29:

Huang (Figure 1) and (Column 3, lines 5-67) discloses the electronic commerce system for use over a global communications network recited in claim 28 wherein said initially instantiated database of selectable data files is stored in a select memory unit, where the select memory units are the memory units of the servers.

In reference to claim 30:

Huang (Figure 2) & (Column 4, lines 40-65) discloses the system for use over a global communications network recited in Claim 19 wherein said security controller is further operable, prior to subsequently dividing said database into portions, to combine said ones of said portions previously stored in ones of said distributed memory units in a select memory unit, where the portions of the distributed memory units may be executed and stored in a common memory area, or the storage unit (Figure 2, Item 226) of the Interface computer.

In reference to claim 31:

Diaz et al. Figures (10B- 10J) discloses the electronic system for use over a global communications network recited in claim 19 wherein said communications controller is further operable to organize said selected portions of said commercial information that propagate said communication interfaces into channels accessible by said constituency nodes, where the channels are organized across a variety of different topics.

In reference to claim 32:

Diaz et al. Figures (10B- 10J) discloses the electronic system for use over a global communications network recited in claim 31 wherein said channels include at least two of an overview channel, an outlook channel, a community consensus channel, a community forecast channel, a research channel, an online q&a channel, an online conference channel, a financial history channel and a newsroom channel.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of the final action and the advisory action is not mailed under after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension pursuant to 37 CFR 1.136(A) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be

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reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Gregory A. Morse can be reached on (571)272-3838.

The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

Any inquiry of a general nature or relating to the status of this application or proceeding should

be directed to the receptionist whose telephone number is (571)272-2100.

General Information/Receptionist	Telephone: 571-272-2100	Fax: 703-872-9306
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TMH

April 1st, 2006

James H. Louie
JAMES H. LOUIE
PRIMARY EXAMINER